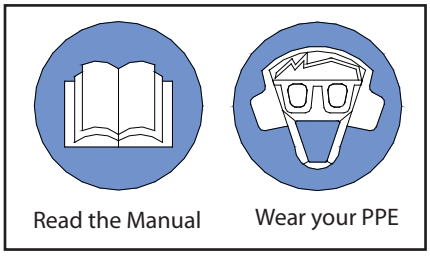
STANLEY

DS11

HYDRAULIC DIAMOND SAW

SAFETY, OPERATION AND MAINTENANCE
USER'S MANUAL



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OPS/MAINT USA
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SERVICING THE STANLEY CONCRETE CHAINSAW: This manual contains safety, operation, and routine maintenance instructions. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the following warning.

WARNING

SERIOUS INJURY OR DEATH COULD RESULT FROM THE IMPROPER REPAIR OR SERVICE OF THIS TOOL.

REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools at the number listed on the back of this manual and ask for a Customer Service Representative.

CERTIFICATE OF CONFORMITY
ÜBEREINSTIMMUNGS-ZERTIFIKAT
CERTIFICAT DE CONFORMITE CEE
CERTIFICADO DE CONFORMIDAD
CERTIFICATO DI CONFORMITA

CE

STANLEY

Hydraulic Tools

I, the undersigned:
Ich, der Unterzeichnende:
Je soussigné:
El abajo firmante:
lo sottoscritto:

Burrows, James

Surname and First names/Familiennname und Vornamen/Nom et prénom/Nombre y apellido/Cognome e nome

hereby certify that the construction plant or equipment specified hereunder:
bestätige hiermit, daß das im folgenden genannten Werk oder Gerät:
certifies par ceci que l' usine ou l' équipement de construction indiqué cidessous:
por el presente certifico que la fabrica o el equipo especificado a continuacion:
certifico che l'impianto o l'attrezzatura sotto specificata:

1. Category: Diamond Chain Saw
   Kategorie:
   Catégorie:
   Categoria:
   Categoria:

2. Make/Ausführung/Marque/Marca/Marca Stanley

3. Type/Typ/Type/Tipo/Tipo: DS11

4. Serial number of equipment:
   Seriennummer des Geräts:
   Numéro de série de l'équipement:
   Numero de serie del equipo:
   Matricola dell´attrezzatura:

   All

5. Year of manufacture/Baujahr/année de fabrication/Año de fabricacion/Anno di fabbricazione Beginning 2004

Has been manufactured in conformity with - EEC Type examination as shown.
Wurde hergestellt in Übereinstimmung mit - EEC Typ-Prüfung nach.
Est fabriqué conformément - au(x) type(s) examiné(s) comme indiqué dans le tableau ci-après.
Ha sido fabricado de acuerdo con - tipo examen EEC como dice.
E' stata costruita in conformitá con - le norme CEE come illustrato.

	Examen CEE de type			
Directive Richtlinie Directives particulières Directriz Direttiva	No. Nr Numéro No n.	Date Datum Date Fecha Data	Approved body Prüfung durch Organisme agréé Aprobado Collaudato	Date of expiry Ablaufdatum Date d´expiration Fecha de caducidad Data di scadenza
Machinery Directive EN ISO ISO ISO	98/37/EC 12100-1 8662-1 3744 10726	1998 2007 1988 1994 1992	Self Self Self Self Self	NA NA NA NA NA

6. Special Provisions: None
   Spezielle Bestimmungen:
   Dispositions particulières:
   Provisiones especiales:
   Disposizioni speciali:

7. Representative in the Union: Stanley Dubuis 17-19, rue Jules Berthonneau-BP 3406 41034 Blois Cedex, France.

Done at/Ort/Fait à/Dado en/Fatto a Stanley Hydraulic Tools, Milwaukie, Oregon USA Date/Datum/le/Fecha/Data 6-06-04

Signature/Unterschrift/Signature/Firma/Firma James O'Burrows

Position/Position/Fonction/Puesto/Posizione Engineering Manager

rev02 3/05

SAFETY SYMBOLS

Safety symbols and signal words, as shown below, are used to emphasize all operator, maintenance and repair actions which, if not strictly followed, could result in a life-threatening situation, bodily injury or damage to equipment.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER — **This safety alert and signal word indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

⚠ WARNING — **This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION — **This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

CAUTION — **This signal word indicates a potentially hazardous situation which, if not avoided, may result in property damage.**

NOTICE — **This signal word indicates a situation which, if not avoided, will result in damage to the equipment.**

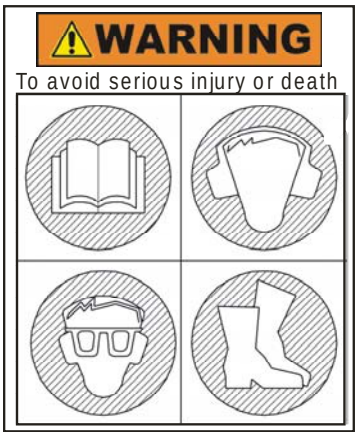
IMPORTANT — **This signal word indicates a situation which, if not avoided, may result in damage to the equipment.**

Always observe safety symbols. They are included for your safety and for the protection of the tool.

LOCAL SAFETY REGULATIONS

Enter any local safety regulations here. Keep these instructions in an area accessible to the operator and maintenance personnel.

SAFETY PRECAUTIONS



Tool operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the tool and hose.

These safety precautions are given for your safety. Review them carefully before operating the tool and before performing general maintenance or repairs.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. If so, place the added precautions in the space provided on page 4.

The DS11 Concrete Chain Saw will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.

- Establish a training program for all operators to ensure safe operation.
- The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Do not operate the chain saw unless thoroughly trained or under the supervision of an instructor.
- Always wear safety equipment such as goggles, ear, head protection, leg protection, gloves, snug fitting clothing and safety shoes at all times when operating the chain saw.
- Do not overreach. Maintain proper footing and balnace at all times.
- Do not inspect or clean the chain saw while the hydraulic power source is connected. Accidental engagement of the chain saw can cause serious injury.
- Always connect hoses to the chain saw hose couplers before engergizing the hydraulic power source. Make sure all hose connections are tight.
- Do not operate the chain saw at fluid temperatures above 140°F/60°C. Operation at higher temperatures can cause higher than normal temperatures at the chain saw which can result in operator discomfort.
- Do not rely exclusively upon the safety devices built into the chain saw. As a chain saw user, several steps must be taken to keep your cutting jobs free from accident or injury:

  1. With a basic understanding of kickbacks, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.

  2. Keep a good firm grip on the chain saw with both hands, the right hand on the rear handle and the left hand on the front handle when operating the chain saw. Use a firm grip with thumbs and fingers encircling the chain saw handles. A firm grip helps reduce kickbacks and maintains control of the chain saw. Do not let go.

  3. Make sure the area in which you are cutting is free of obstructions.

  4. Cut at rated operating speeds (gpm).

  5. Do not overreach or cut above shoulder height.

  6. Only use replacement bars and chains specified by Stanley or the equivalent.

- Make sure the chain guard is in place before operating the chain saw.
- Remove or control the water slurry to prevent yourself or others from slipping while cutting.
- Provide adequate ventilation in closed areas when operating a gas or diesel hydraulic power source.

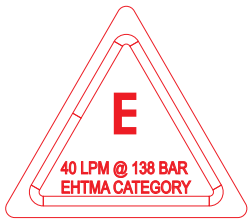
SAFETY PRECAUTIONS

- Always be well rested and mentally alert before operating the chain saw.
- Do not allow bystanders near the chain saw when starting or cutting.
- Do not start cutting until you have a clear work area and secure footing.
- Keep all parts of the body away from the chain saw during operation.
- Carry the chain saw with the tool deenergized and the bar and chain to the rear of your body.
- Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled. Make sure the chain stops moving when the control trigger is released.
- Keep the handle dry, clean and free of hydraulic fluid.
- Do not use the chain saw near energized transmission lines.
- Turn off the power source or move the hydraulic control valve to neutral before setting the chain saw down.
- Use a guide bar scabbard when transporting the chain saw.
- Know the location of buried or covered electrical services before starting work.
- To avoid personal injury or equipment damage, all chain saw repair, maintenance and service must only be performed by authorized and properly trained personnel.
- Make sure the chain breaker and rivet spinner are securely mounted on flat, clean work surfaces. Check the mounting screws/bolts often.
- Check all chain breaker and rivet spinner components regularly for wear and general condition.

⚠ WARNING

Exposure to crystalline Silica (sometimes called “silica dust”) as a result of breaking, drilling, or hammering of rock, concrete, asphalt or other materials may cause Silicosis (a serious lung disease), silicosis-related illnesses, cancer, or death.
Respiratory protection is highly recommended when working with materials containing Silica Dust.
Always wear a respirator approved for protection against crystalline silica.

TOOL STICKERS & TAGS



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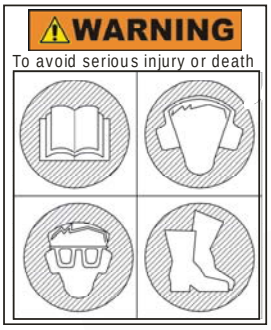

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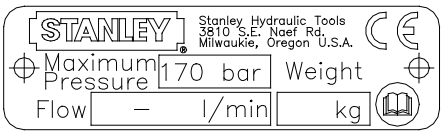

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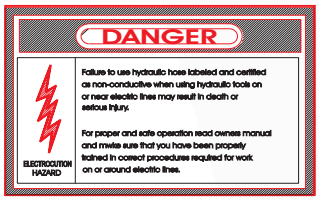
DANGER
Failure to use hydraulic hose labeled and certified as non-conductive when using hydraulic tools on or near electric lines may result in death or serious injury.
For proper and safe operation read owners manual and make sure that you have been properly trained in correct procedures required for work on or around electric lines.
ELECTROCUTION HAZARD

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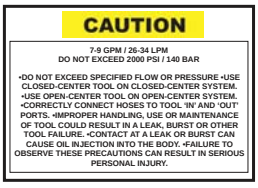
CAUTION
7-9 GPM / 26-34 LPM
DO NOT EXCEED 2000 PSI / 140 BAR
•DO NOT EXCEED SPECIFIED FLOW OR PRESSURE •USE CLOSED-CENTER TOOL ON CLOSED-CENTER SYSTEM. •USE OPEN-CENTER TOOL ON OPEN-CENTER SYSTEM. •CORRECTLY CONNECT HOSES TO TOOL 'IN' AND 'OUT' PORTS. •IMPROPER HANDLING, USE OR MAINTENANCE OF TOOL COULD RESULT IN A LEAK, BURST OR OTHER TOOL FAILURE. •CONTACT AT A LEAK OR BURST CAN CAUSE OIL INJECTION INTO THE BODY. •FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS PERSONAL INJURY.

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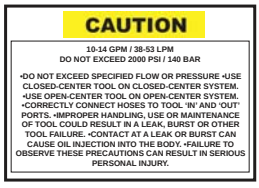
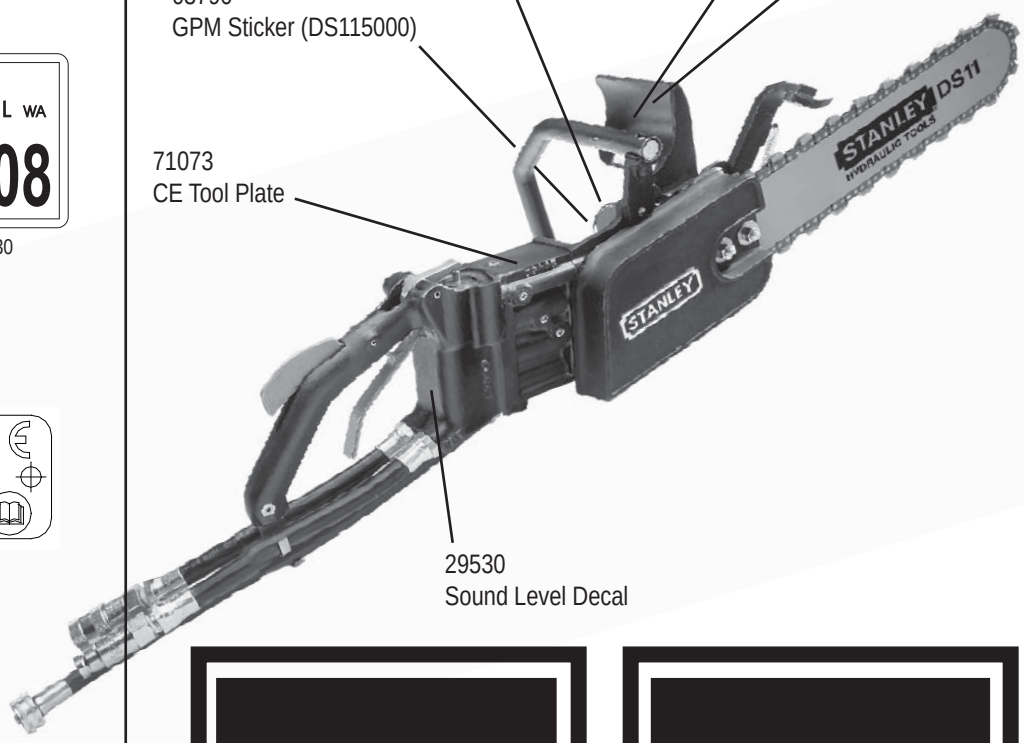

CAUTION
10-14 GPM / 38-53 LPM
DO NOT EXCEED 2000 PSI / 140 BAR
•DO NOT EXCEED SPECIFIED FLOW OR PRESSURE •USE CLOSED-CENTER TOOL ON CLOSED-CENTER SYSTEM. •USE OPEN-CENTER TOOL ON OPEN-CENTER SYSTEM. •CORRECTLY CONNECT HOSES TO TOOL 'IN' AND 'OUT' PORTS. •IMPROPER HANDLING, USE OR MAINTENANCE OF TOOL COULD RESULT IN A LEAK, BURST OR OTHER TOOL FAILURE. •CONTACT AT A LEAK OR BURST CAN CAUSE OIL INJECTION INTO THE BODY. •FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS PERSONAL INJURY.

03790 DS115000

12535
Circuit "E" Decal - DS115000 Only
11207
Circuit "D" Decal - DS113000 Only
28409
Composit Decal
12412
Warning Decal
03786
GPM Sticker (DS113000)
03790
GPM Sticker (DS115000)
71073
CE Tool Plate
29530
Sound Level Decal



1. FAILURE TO USE HYDRAULIC HOSE **LABELED AND CERTIFIED AS NON-CONDUCTIVE** WHEN USING HYDRAULIC TOOLS ON OR NEAR ELECTRICAL LINES MAY RESULT IN DEATH OR SERIOUS INJURY.

   BEFORE USING HOSE **LABELED AND CERTIFIED AS NON-CONDUCTIVE** ON OR NEAR ELECTRIC LINES BE SURE THE HOSE IS **MAINTAINED AS NON-CONDUCTIVE**. THE HOSE SHOULD BE REGULARLY TESTED FOR ELECTRIC CURRENT LEAKAGE IN ACCORDANCE WITH YOUR SAFETY DEPARTMENT INSTRUCTIONS.

2. A HYDRAULIC LEAK OR BURST MAY CAUSE OIL INJECTION INTO THE BODY OR CAUSE OTHER SEVERE PERSONAL INJURY.

   A **DO NOT** EXCEED SPECIFIED FLOW AND PRESSURE FOR THIS TOOL. EXCESS FLOW OR PRESSURE MAY CAUSE A LEAK OR BURST.

   B **DO NOT** EXCEED RATED WORKING PRESSURE OF HYDRAU LIC HOSE USED WITH THIS TOOL. EXCESS PRESSURE MAY CAUSE A LEAK OR BURST.

   C CHECK TOOL HOSE COUPLERS AND CONNECTORS DAILY FOR LEAKS. **DO NOT** FEEL FOR LEAKS WITH YOUR HANDS. CONTACT WITH A LEAK MAY RESULT IN SEVERE PERSONAL INJURY.

IMPORTANT

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

SEE OTHER SIDE

D DO NOT LIFT OR CARRY TOOL BY THE HOSES. DO NOT ABUSE HOSE. DO NOT USE KINKED, TORN OR DAMAGED HOSE.

3. MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONNECTED TO THE TOOL BEFORE PRESSURING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL "IN" PORT. SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED TO TOOL "OUT" PORT. REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN RESULT IN SEVERE PERSONAL INJURY.

4. DO NOT CONNECT OPEN-CENTER TOOLS TO CLOSED-CENTER HYDRAULIC SYSTEMS. THIS MAY RESULT IN LOSS OF OTHER HYDRAULIC FUNCTIONS POWERED BY THE SAME SYSTEM AND/OR SEVERE PERSONAL INJURY.

5. BYSTANDERS MAY BE INJURED IN YOUR WORK AREA. KEEP BYSTANDERS CLEAR OF YOUR WORK AREA.

6. WEAR HEARING, EYE, FOOT, HAND AND HEAD PROTECTION.

7. TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR MAINTENANCE AND SERVICE MUST ONLY BE PERFORMED BY AUTHORIZED AND PROPERLY TRAINED PERSONNEL.

IMPORTANT

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

SEE OTHER SIDE

SAFETY TAG P/N 15875 (shown smaller then actual size)

The safety tag (p/n 15875) at right is attached to the tool when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the tool when not in use.

TOOL HOSE INFORMATION

HOSE TYPES

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system.There are three types of hydraulic hose that meet this requirement and are authorized for use with Stanley Hydraulic Tools. They are:

Certified non-conductive - constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *Hose labeled **certified non-conductive** is the only hose authorized for use near electrical conductors.*

Wire-braided (conductive) - constructed of synthetic rubber inner tube, single or double wire braid reinforcement, and weather resistant synthetic rubber cover. *This hose is **conductive** and must never be used near electrical conductors.*

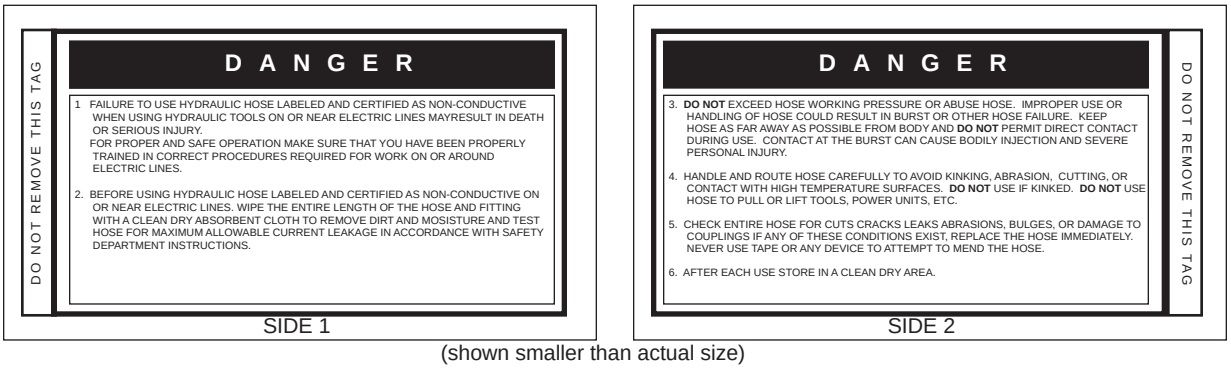
Fabric-braided (not certified or labeled non-conductive) - constucted of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *This hose is **not certified non-conductive** and must never be used near electrical conductors.*

HOSE SAFETY TAGS

To help ensure your safety, the following DANGER tags are attached to all hose purchased from Stanley Hydraulic Tools. DO NOT REMOVE THESE TAGS.

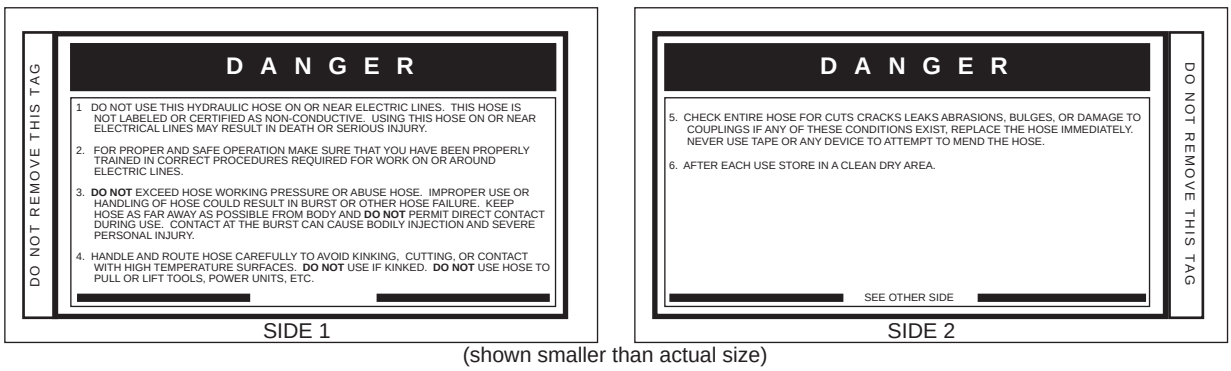
If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your Stanley Distributor.

THE TAG SHOWN BELOW IS ATTACHED TO "CERTIFIED NON-CONDUCTIVE" HOSE


DO NOT REMOVE THIS TAG
D A N G E R
1 FAILURE TO USE HYDRAULIC HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE WHEN USING HYDRAULIC TOOLS ON OR NEAR ELECTRIC LINES MAYRESULT IN DEATH OR SERIOUS INJURY.
FOR PROPER AND SAFE OPERATION MAKE SURE THAT YOU HAVE BEEN PROPERLY TRAINED IN CORRECT PROCEDURES REQUIRED FOR WORK ON OR AROUND ELECTRIC LINES.
2. BEFORE USING HYDRAULIC HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE ON OR NEAR ELECTRIC LINES. WIPE THE ENTIRE LENGTH OF THE HOSE AND FITTING WITH A CLEAN DRY ABSORBENT CLOTH TO REMOVE DIRT AND MOSISTURE AND TEST HOSE FOR MAXIMUM ALLOWABLE CURRENT LEAKAGE IN ACCORDANCE WITH SAFETY DEPARTMENT INSTRUCTIONS.
SIDE 1
D A N G E R
3. DO NOT EXCEED HOSE WORKING PRESSURE OR ABUSE HOSE. IMPROPER USE OR HANDLING OF HOSE COULD RESULT IN BURST OR OTHER HOSE FAILURE. KEEP HOSE AS FAR AWAY AS POSSIBLE FROM BODY AND DO NOT PERMIT DIRECT CONTACT DURING USE. CONTACT AT THE BURST CAN CAUSE BODILY INJECTION AND SEVERE PERSONAL INJURY.
4. HANDLE AND ROUTE HOSE CAREFULLY TO AVOID KINKING, ABRASION, CUTTING, OR CONTACT WITH HIGH TEMPERATURE SURFACES. DO NOT USE IF KINKED. DO NOT USE HOSE TO PULL OR LIFT TOOLS, POWER UNITS, ETC.
5. CHECK ENTIRE HOSE FOR CUTS CRACKS LEAKS ABRASIONS, BULGES, OR DAMAGE TO COUPLINGS IF ANY OF THESE CONDITIONS EXIST, REPLACE THE HOSE IMMEDIATELY. NEVER USE TAPE OR ANY DEVICE TO ATTEMPT TO MEND THE HOSE.
6. AFTER EACH USE STORE IN A CLEAN DRY AREA.
DO NOT REMOVE THIS TAG
SIDE 2

(shown smaller than actual size)

THE TAG SHOWN BELOW IS ATTACHED TO "CONDUCTIVE" HOSE.


DO NOT REMOVE THIS TAG
D A N G E R
1 DO NOT USE THIS HYDRAULIC HOSE ON OR NEAR ELECTRIC LINES. THIS HOSE IS NOT LABELED OR CERTIFIED AS NON-CONDUCTIVE. USING THIS HOSE ON OR NEAR ELECTRICAL LINES MAY RESULT IN DEATH OR SERIOUS INJURY.
2. FOR PROPER AND SAFE OPERATION MAKE SURE THAT YOU HAVE BEEN PROPERLY TRAINED IN CORRECT PROCEDURES REQUIRED FOR WORK ON OR AROUND ELECTRIC LINES.
3. DO NOT EXCEED HOSE WORKING PRESSURE OR ABUSE HOSE. IMPROPER USE OR HANDLING OF HOSE COULD RESULT IN BURST OR OTHER HOSE FAILURE. KEEP HOSE AS FAR AWAY AS POSSIBLE FROM BODY AND DO NOT PERMIT DIRECT CONTACT DURING USE. CONTACT AT THE BURST CAN CAUSE BODILY INJECTION AND SEVERE PERSONAL INJURY.
4. HANDLE AND ROUTE HOSE CAREFULLY TO AVOID KINKING, CUTTING, OR CONTACT WITH HIGH TEMPERATURE SURFACES. DO NOT USE IF KINKED. DO NOT USE HOSE TO PULL OR LIFT TOOLS, POWER UNITS, ETC.
SIDE 1
D A N G E R
5. CHECK ENTIRE HOSE FOR CUTS CRACKS LEAKS ABRASIONS, BULGES, OR DAMAGE TO COUPLINGS IF ANY OF THESE CONDITIONS EXIST, REPLACE THE HOSE IMMEDIATELY. NEVER USE TAPE OR ANY DEVICE TO ATTEMPT TO MEND THE HOSE.
6. AFTER EACH USE STORE IN A CLEAN DRY AREA.
SEE OTHER SIDE
DO NOT REMOVE THIS TAG
SIDE 2

(shown smaller than actual size)

Tool to Hydraulic Circuit Hose Recommendations

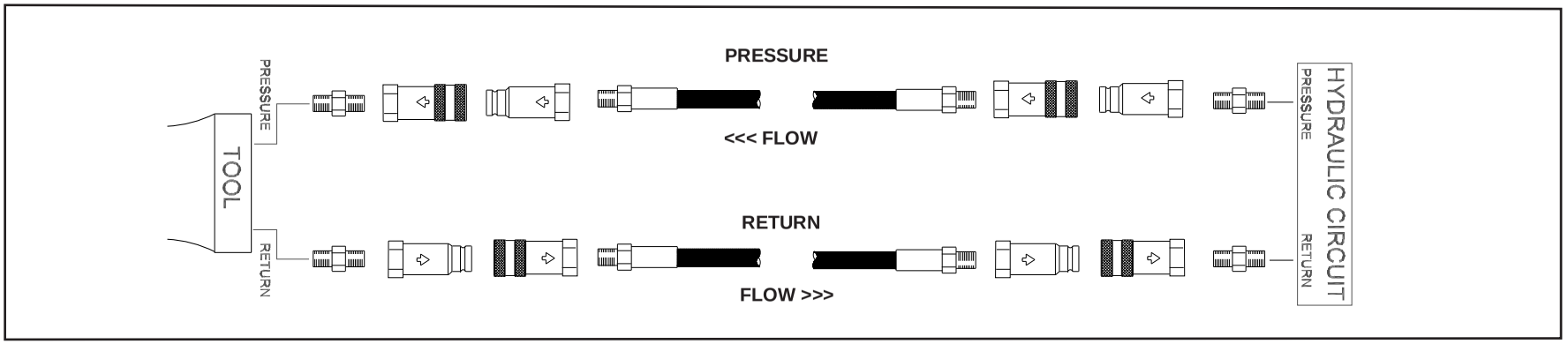
The chart to the right shows recommended minimum hose diameters for various hose lengths based on gallons per minute (gpm)/liters per minute (lpm). These recommendations are intended to keep return line pressure (back pressure) to a minimum acceptable level to ensure maximum tool performance.

This chart is intended to be used for hydraulic tool applications only based on Stanley Hydraulic Tools tool operating requirements and should not be used for any other applications.

All hydraulic hose must have at least a rated minimum working pressure equal to the maximum hydraulic system relief valve setting.

All hydraulic hose must meet or exceed specifications as set forth by SAE J517.

Oil Flow		Hose Lengths		Inside Diameter		USE (Press/Return)	Min. Working Pressure	
GPM	LPM	FEET	METERS	INCH	MM		PSI	BAR
Certified Non-Conductive Hose - Fiber Braid - for Utility Bucket Trucks								
4-9	15-34	up to 10	up to 3	3/8	10	Both	2250	155
Conductive Hose - Wire Braid or Fiber Braid -DO NOT USE NEAR ELECTRICAL CONDUCTORS								
4-6	15-23	up to 25	up to 7.5	3/8	10	Both	2500	175
4-6	15-23	26-100	7.5-30	1/2	13	Both	2500	175
5-10.5	19-40	up to 50	up to 15	1/2	13	Both	2500	175
5-10.5	19-40	51-100	15-30	5/8	16	Both	2500	175
5-10.5	19-40	100-300	30-90	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
10-13	38-49	up to 50	up to 15	5/8	16	Both	2500	175
10-13	38-49	51-100	15-30	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
10-13	38-49	100-200	30-60	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175
13-16	49-60	up to 25	up to 8	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
13-16	49-60	26-100	8-30	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175



Typical Hose Connections

HTMA REQUIREMENTS

HYDRAULIC SYSTEM REQUIREMENTS	TOOL CATEGORY TYPE 1	 TYPE II	TYPE III	TYPE RR
FLOW RATE	4-6 gpm (15-23 lpm)	7-9 gpm (26-34 lpm)	11-13 gpm (42-49 lpm)	9-10.5 gpm (34-40 lpm)
TOOL OPERATING PRESSURE (at the power supply outlet)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)
SYSTEM RELIEF VALVE SETTING (at the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 bar)
MAXIMUM BACK PRESSURE (at tool end of the return hose)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max. fluid viscosity of: (at min. operating temperature)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
TEMPERATURE Sufficient heat rejection capacity to limit max. fluid temperature to: (at max. expected ambient temperature)	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	7 hp (4.47 kW) 40° F (22° C)	6 hp (5.22 kW) 40° F (22° C)
NOTE: Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
FILTER Min. full-flow filtration Sized for flow of at least: (For cold temp. startup and max. dirt-holding capacity)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)
HYDRAULIC FLUID Petroleum based (premium grade, anti-wear, non-conductive) VISCOSITY (at min. and max. operating temps)	100-400 ssu*	100-400 ssu* (20-82 centistokes)	100-400 ssu*	100-400 ssu*
NOTE: When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.				

*SSU = Saybolt Seconds Universal

NOTE:

These are general hydraulic system requirements. See tool Specification page for tool specific requirements.

OPERATION

PREOPERATION PROCEDURES

CHECK THE POWER SOURCE

1. Using a calibrated flow meter and pressure gauge, make sure the hydraulic power source develops a flow of 7-9 gpm/26-34 lpm at 2000 psi/140 bar.

2. Make certain that the power source is equipped with a relief valve set to open at 2100-2250 psi/145-155 bar.

3. Make certain that the power source return pressure does not exceed 250 psi/17 bar.

CONNECT HYDRAULIC HOSES

1. Wipe all hose couplers with a clean lint-free cloth before making connections. If necessary, use a light-weight penetrating oil in a spray can to clean the hose couplers before each connection.

2. Connect the hoses from the hydraulic power source to the chain saw fittings or quick disconnects. It is a good practice to connect return hoes first and disconnect them last to minimize or avoid trapped pressure within the chain saw.

3. Observe the arrow on the couplers to ensure that the flow is in the proper direction. the female coupler on the chain saw is the inlet (pressure) coupler.

4. Move the hydraulic circuit control valve to the “ON” position to operate the chain saw.

NOTE:
If uncoupled hoses are left in the sun, pressure increase inside the hoses might make them difficult to connect. Whenever possible, connect the free ends of the hoses together.

CONNECTING TO A WATER SUPPLY

1. Using a standard garden hose, connect the DS11 to a city or auxiliary water supply.

2. Holding the saw away from your body, turn the saw on and read the water pressure at the water gauge. Water pressure must be at least 35 psi/2.4 bar to avoid damage to the saw bar and chain.

3. If you plan on operating the chain saw in freezing weather, make sure you purge all the water from the system after each use.

4. If the water pressure is below 35 psi/2.4 bar, make the required adjustments to the water supply. If the required pressure cannot be achieved, you must use the Stanley Electric Water Pump Kit (Part Number 26020 or the Power Unit Water Pump Kit Part Number 29361).

CHECK CHAIN AND BAR ADJUSTMENT

1. Check the chain tension often during operation, expecially during the first 1/2 hour when using a new chan. Adjust the chain accordingly when it becomes loose. Follow the prcedures contained in the Mainenance and Adjustements section of this manual.

2. Make sure the chain does not exceed a clearance of 1/4 in./6 mm from the bar (see figure 2). Exceeding the maximum clearance increases the chance of the chain being dislodged from the bar groove.

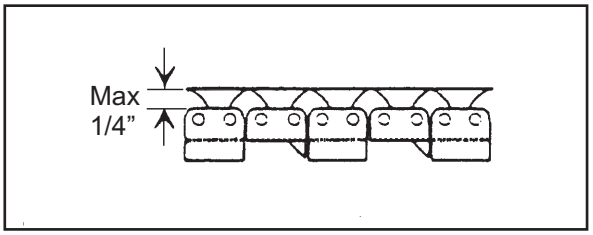


Figure 2. Maximum Chain Clearance

3. Make sure the bar attaching nuts are fully tightened and the chain guard is in place.

CHECK CHAIN SEGMENT WEAR

1. Using adjustable calipers, measure several chain segments as illustrated in Figure 3.

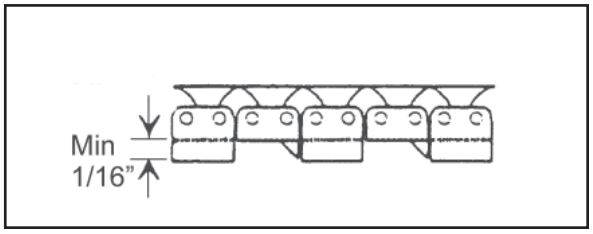


Figure 3. Chain Segment Wear

2. If the average measurement is less than 1/16-inch/1.6 mm, then the chainmust be replaced. Refer to your Service Manual for chain replacement procedures.

CHECK THE WATER SUPPLY

IMPORTANT

Chain and bar damage will occur if the chain saw operates without the proper water supply.

1. Always have water running before starting the chain saw.

2. Water flow must be 4 gpm/15 lpm at 50 psi/3.5 bar minimum.

OPERATING PROCEDURES

NEW SAW CHAIN BREAK-IN

1. Always make sure the bar and sprocket are in good condition.

2. Turn on the water supply.

3. Operate the chain saw for two minutes (away from the intended cut) and then check the chain tension.

4. Adjust accordingly using the procedures contained in the Maintanence and Adjustments section of this manual.

NOTE:
The chain is designed to only operate in one direction. Make sure the chain is installed so the bumper guard proceeds each diamond segment. (See figure 4).

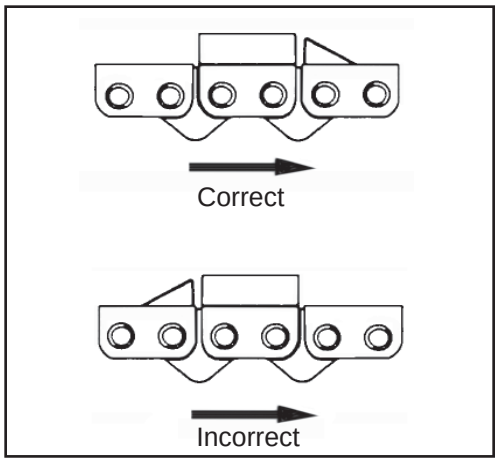


Figure 4. Chain Direction

CUTTING TIPS

NOTICE

The following are general cutting procedures and techniques. Differences in the terrain and the type of material being cut will make this information more or less valid for particular areas. For advice on specific cutting problems or techniques, consult your local Lynx Representative. He/she can often provide information that will make your work safter and more productive.

PLAN THE CUT

1. Plan your cuts to prevent injury to yourself and to keep from pinching the saw bar and chain as a result of falling pieces of concrete, brick, etc.

2. Make your cuts in the order shown in Figure 5, starting with cut 1 (base horizontal cut) and proceeding with the remaining three cuts.

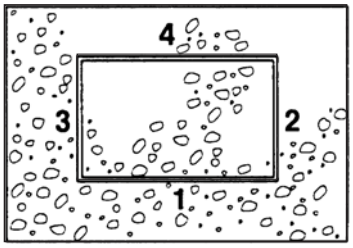


Figure 5. Making Cuts

3. Outline the concrete area with a permanent marker for a visual guide.

4. Know what kind of material and how much reinforcing you are going to cut.

TYPES OF CUTS

The DS11 can be operated using the types of cuts shown in Figure 6. When making cuts:

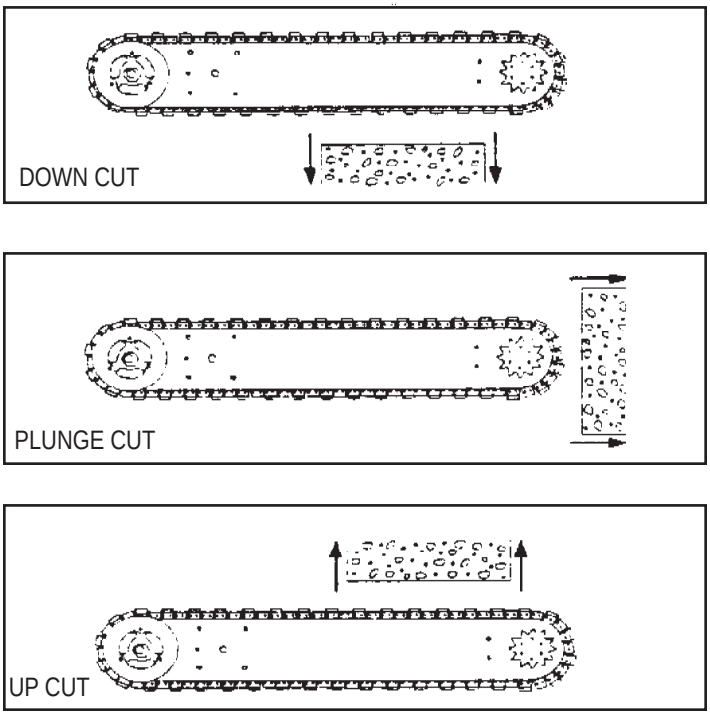


Figure 6. Types of Cuts (chain guard removed for clarity)

1. Do not use a cutting force in excess of 45 lbs/20 kg. Excessive force causes the chain to slow down or stall and causes premature wear of the saw bar and chain.

2. Always maintain a high chain speed. High chain speeds produce the best results.

3. Avoid aggressive/heavy plunge forces. Aggressive plunge force creates spalling of the concrete when the saw bar and chain exits and causes premature bar and chain wear.

COLD WEATHER OPERATION

If the saw is to be used during cold weather, preheat the hydraulic fluid at low power source speed. When using the normally recommended fluids, fluid should be at or above 50°F/10°C (400 ssu/82 centistokes) before use.

Damage to the hydraulic system or chain saw can result from use with fluid that is too viscous or thick.

MAINTENANCE & ADJUSTMENTS

GENERAL MAINTENANCE TIPS

Several simple maintenance tasks which, if performed, can keep a chain saw operating at a high level of efficiency. Routine maintenance also keeps replacement costs down on the parts of the chain saw, which occasionally wear out.

If any chain saw disassembly is required, refer to the Service Manual.

SAW BAR RAIL

A quick check can be made to determine if saw bar rail or chain segment wear exists. Figure 7 shows a worn saw bar rail.

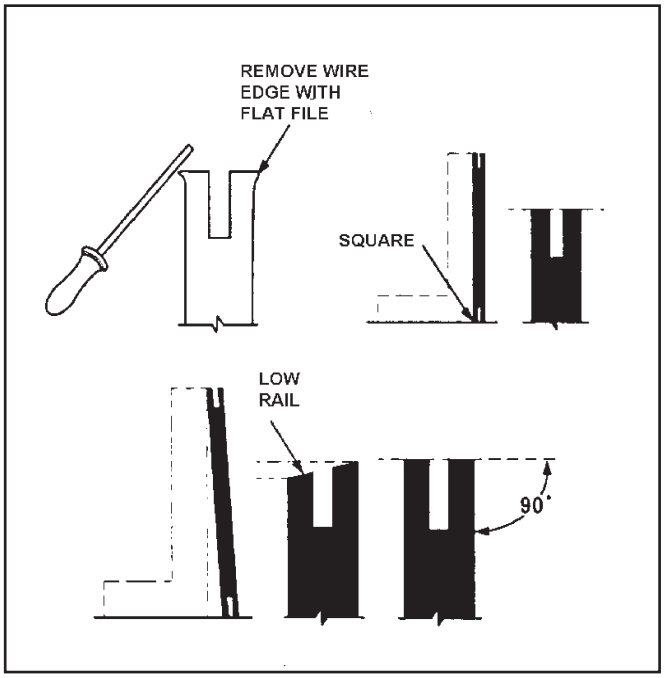


Figure 7. Rail Wear

If the saw bar rails are worn, use a flat file and dress each one until it is flat and square with the side of the saw bar (Figure 7).

Also make sure the saw bar is perfectly straight. If bows or bends are present in the saw bar, it must be replaced before dressing any rail.

ROTATING THE SAW BAR

Maximum saw bar life can be achieved by occasionally turning the bar over so the top and bottom bar surfaces wear evenly. Refer to the saw bar disassembly procedures in the Service Manual for further details.

CHAIN TENSION ADJUSTMENT

Correct chain tension is very important throughout the life of the chain. Check the chain tension often during use (when the chain saw is stopped and the saw bar and chain have cooled off). The chain should move easily around the saw bar when pulled by hand. To adjust the chain tension:

1. Turn off the water and power supplies.

2. Loosen the two saw bar attachment nuts (Item 62, Parts Illustration).

3. Using the saw bar adjustment screw (Item 65, Parts Illustration), tighten the chain until you are still able to rotate it one full revolution by hand (Figure 9).

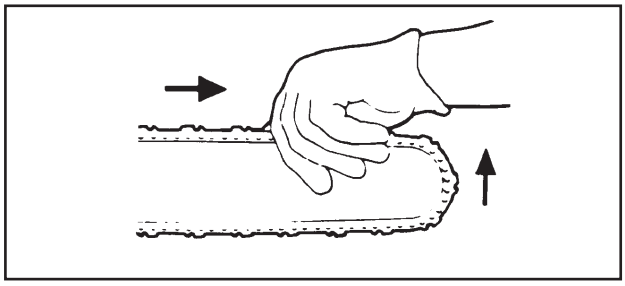


Figure 9. Pulling the Chain

4. Using hand and finger protection pull the chain around the saw bar to make sure it properly fits the sprocket and saw bar. The chain should be easily pulled.

5. Fully tighten the two saw bar attachment nuts.

NOTE:
Adjust the chain tension each time the drive link tang hangs fully exposed from the groove at the bottom of the

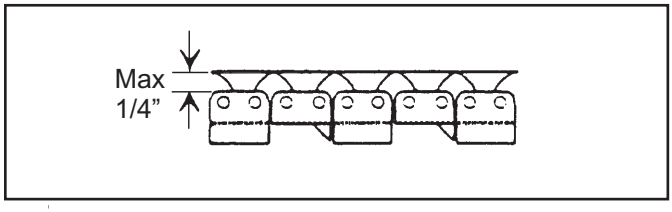


Figure 10. Exposed Drive Link Tang

MAINTENANCE & ADJUSTMENTS

SERVICING THE CHAIN

The following procedures explain how to break a chain using Stanley's bench mounted chain breaker (part number 20858) to remove a worn or damaged segment.

1. Mount the chain breaker flush with the side or front of a flat, clean work surface (Figure 11).

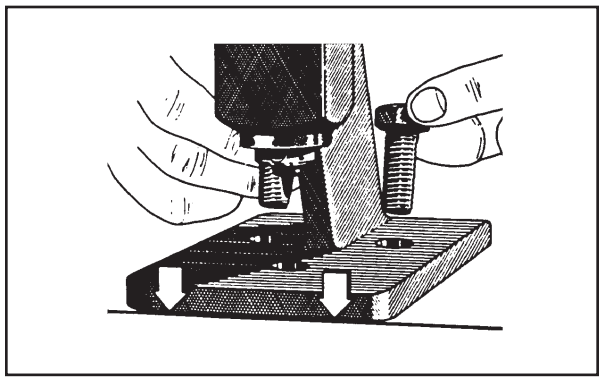


Figure 11. Chain Breaker Mounting

NOTE:
The Stanley chain breaker is only designed to remove rivet heads from the connecting links, not from a chain segment. The rivet heads shown in the shaded areas of Figure 12 are the only ones that can be removed.

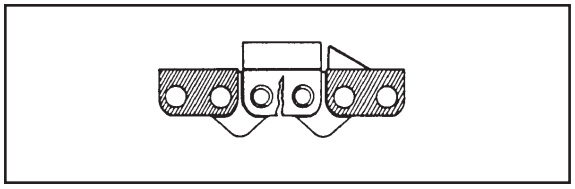
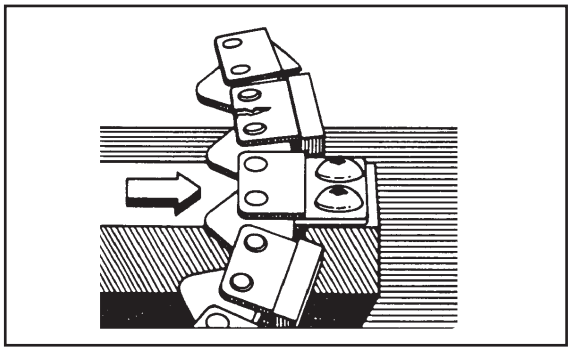


Figure 12. Removable Rivet Heads

2. Place the chain (the portion that you want broken) into the slot of the anvil pushing it forward until the bottom connecting link is flush with the far side of the slot (Figure 13).



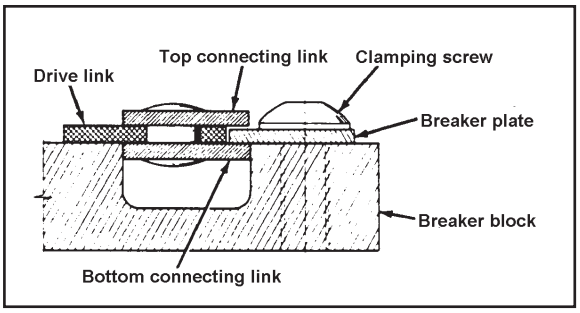


Figure 13. Inserting the Chain

3. Position the rivet head you want removed directly under the chain-breaker punch and then pull the handle down far enough to remove the rivet (Figure 14). Do not use excessive force.

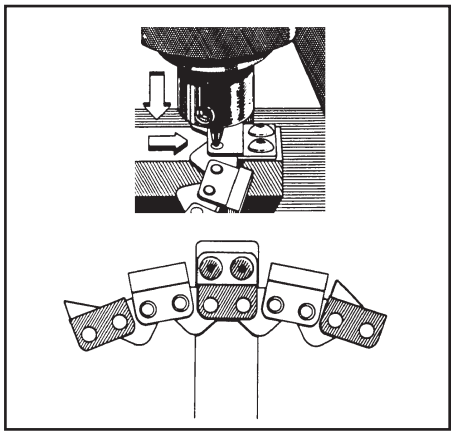


Figure 14. Removing a Rivet

MAINTENANCE & ADJUSTMENTS

REPLACING THE CHAIN BREAKER PUNCH

If the chain breaker punch (part number 22801) becomes worn or damaged, use the following prcedures for replacement.

1. Remove the punch by loosening the set screw (Figure 15).

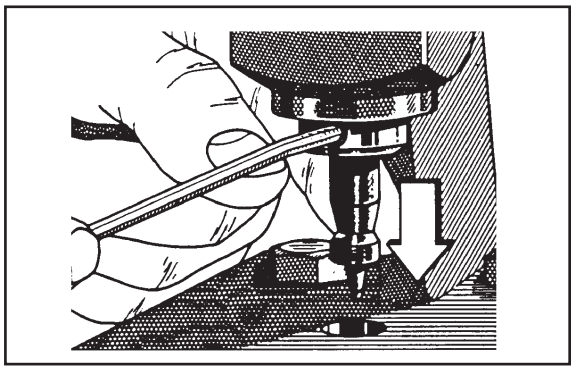


Figure 15. Removing the Punch

2. Insert a new punch into the holder and push it up until it is fully seated (Figure 16). Secure the punch to the chain breaker holder by fully tightening the set screw.

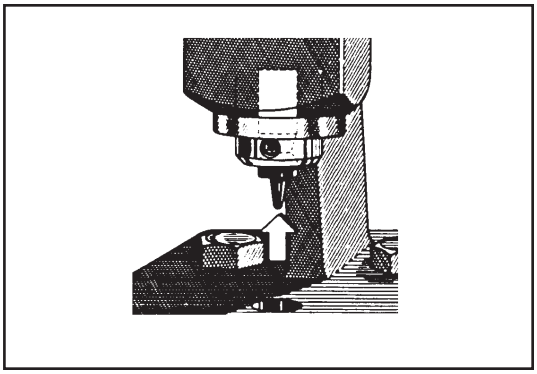


Figure 16. Replacing the Punch

SPINNING RIVETS

The following procedures explain how to spin rivets using Stanley's bench-mounted rivet spinner (part number 20857) to assembly the chain.

1. Mount the rivet spinner flush with the side or front of a flat, clean work surface (Figure 17).

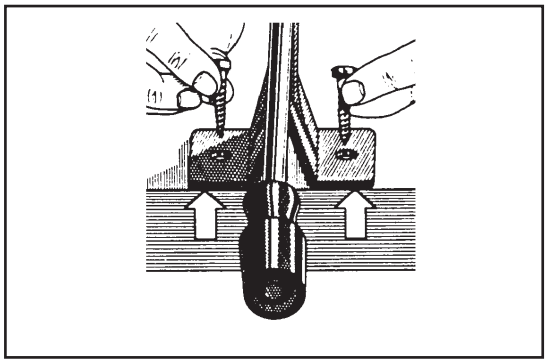


Figure 17. Rivet Spinner Mounting

2. Lay the chain across the plastic chain supports and then rotate the supports so the rivet head is centered between the take-up handle pocket and the spinner anvil (Figure 18).

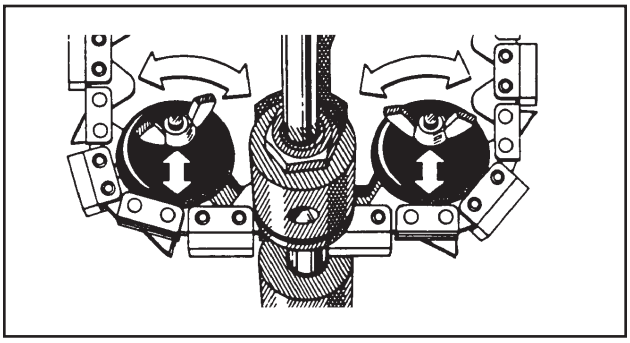


Figure 18. Positioning the Chain

3. Turn the take-up handle until the chain is tight against the spinner anvil (Figure 19).

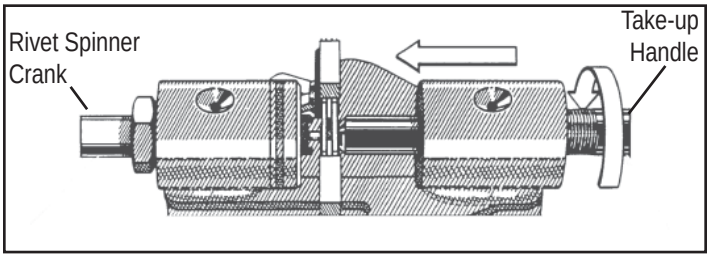


Figure 19. Securing the Chain

4. turn the rivet spinner crank a few times to center the rivet hub in the spinner anvil (Figure 20).

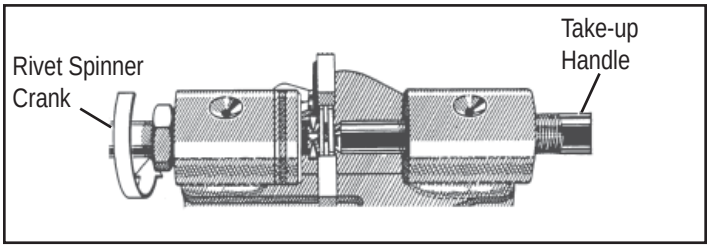


Figure 20. Centering the Rivet Hub

5. Apply a few drops of oil to the rivet hub (Figure 21).

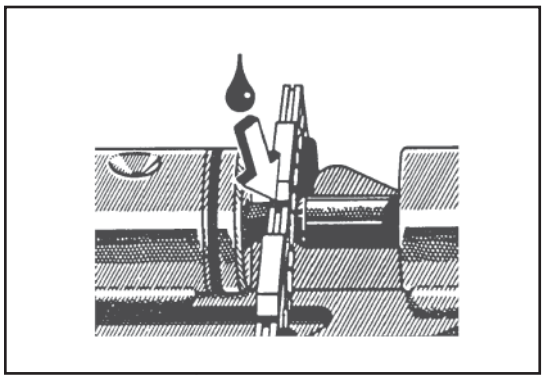


Figure 21. Applying the Oil

6. Turn the spinner crank while slowly running the take-up handle inward (approximately one full revolution) until the rivet head is formed (Figure 22).

NOTE:
The take-up handle provides pressure while the spinner anvil forms the rivet head.

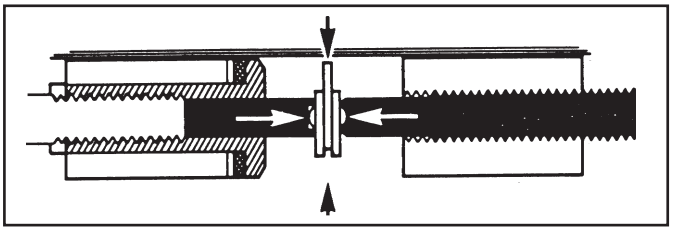


Figure 22. Forming a Rivet Head

NOTE:
the rivet spinner is equipped with oiling chambers and should be maintained periodically with a light-weight oil (Figure 23).

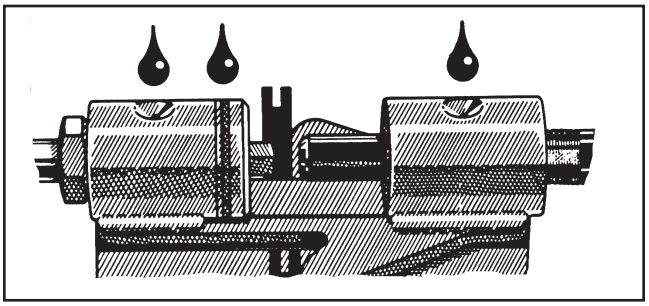


Figure 23. Spinner Oiling Chambers

TOOL EQUIPMENT & CARE

NOTICE

In addition to the Safety Precautions on page in this manual, observe the following for equipment protection and care.

- Make sure all couplers are wiped clean before connection.
- The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling hydraulic tools. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.
- Always store the tool in a clean dry space, safe from damage or pilferage.
- Make sure the circuit PRESSURE hose (with male quick disconnect) is connected to the “IN” port. The circuit RETURN hose (with female quick disconnect) is connected to the opposite port. Do not reverse circuit flow. This can cause damage to internal seals.
- Always replace hoses, couplings and other parts with replacement parts recommended by Stanley Hydraulic Tools. Supply hoses must have a minimum working pressure rating of 2500 psi/172 bar.
- Do not exceed the rated flow and pressure. See Specifications page in this manual for correct flow rate and rated pressure. Rapid failure of the internal seals may result.
- Always keep critical tool markings, such as warning stickers and tags legible.
- Tool repair should be performed by experienced personnel only.
- Make certain that the recommended relief valves are installed in the pressure side of the system.
- Do not use the tool for applications for which it was not intended.

TROUBLESHOOTING

CHAIN SAW TROUBLESHOOTING

Excessive vibration and cuts rough.	Loose chain tension.	Retension the chainl.
	Excessive feed force.	Reduce feed force.
Chain saw will not cut straight.	Operator feed force not applied directly over centerline of saw. Accumulated saw bar wear and uneven chain segment profile wear.	move left hand closer to centerline of saw bar. Turn the saw bar over and dress rails square. Replace the saw bar and chain.
Loss of power.	Drive sprocket slipping on Trantorque® adapter.	Adjust and tighten Trantorque® adapter, (35 ft lbs/47 Nm).
Chain saw does not run.	Power source not functioning.	Check power source for proper flow and pressure (7-9 gpm/26-34 lpm @ 2000 psi/140 bar).
	Coupler or hoses are blocked.	Remove obstruction.
	Mechanical failure.	Disassemble the chain saw and inspect for damage.
Chain saw runs backwards.	Pressure and return hoses reversed.	Connect for proper flow direction. Motor shaft must rotate clockwise.
Trigger is hard to press.	Pressure and return hoses reversed.	Connect to proper flow direction. Motor shaft must rotate clockwise.
	Back pressure too high.	Should not exceed 250 psi/17 bar @ 9 gpm/34 lpm measured at the end of the chain saw's operating hoses.
Fluid leakage around drive sprocket.	Motor shaft seal failure.	Replace as required.
Fluid leakage between the rear gear housing and the chain saw adaptor.	Motor face seal failure.	Replace as required.
Fluid leakage between the valve handle and the extension housing.	Oil tube seal failure.	Replace as required.
Fluid leakage between the extension housing assembly and the chain saw adaptor.	Oil tube seal failure.	Replace as required.
Chain saw cuts slow.	Insufficient hydraulic fluid flow or low relief valve setting.	Adjust proper hydraulic fluid flow to proper gpm. For optimum performance, adjust relief valve to 2100-2250 psi/145-155 bar.

TROUBLESHOOTING

CHAIN SAW TROUBLESHOOTING CONTINUED

Chain saw cuts slow.	Back pressure too high.	Should not exceed 250 psi/17 bar @ 9 gpm/34 lpm measured at the end of the chain saw's operating hoses.
	Loss of diamond segment side clearance.	Replace the chain.
	Hydraulic fluid mixed in water supply.	Check motor for leaks.
	Chain segment dulled because of continuous use in hard material or rebar.	Redress segment by cutting in abrasive material (i.e., concrete, build-block, etc.). NOTE: This indicates that the wrong chain is being used.
	Wrong chain for application.	Scale down to a lower numbered chain.
	Wire edged bar rails.	Dress rails square.
Excessive vibration and cuts rough.	Segment(s) broken or missing from chain.	Remove and repair broken segment or replace chain.

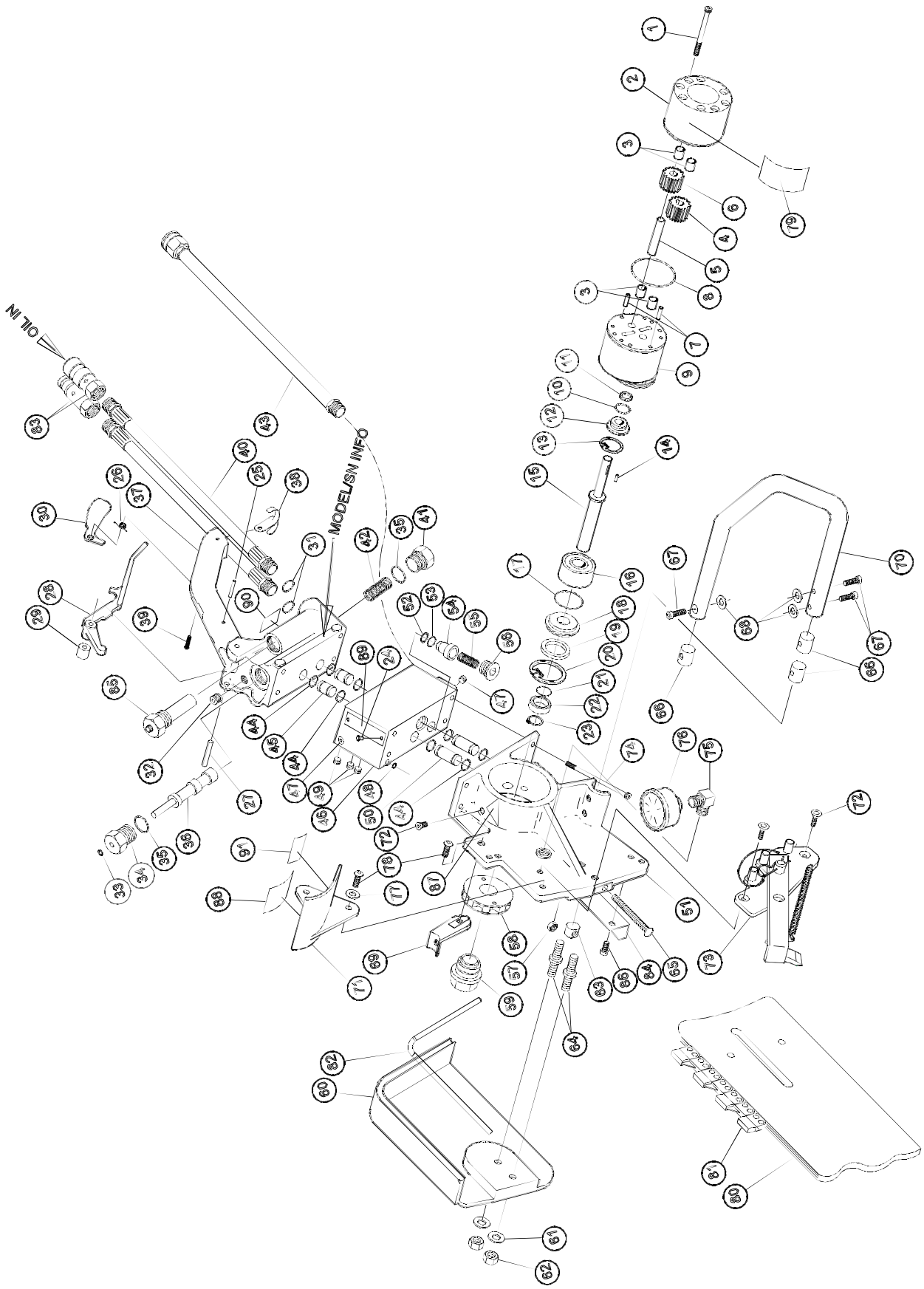
SPECIFICATIONS

Cutting Depths	15 or 18 inch / 38 or 46 cm
Bar Lengths	15 or 18 inch / 38 or 46 cm
Input Flow Range	
DS113000	7-9 gpm / 26-34 lpm
DS115000	12 gpm/45 lpm
Input Pressure	2000 psi / 140 bar
Chain Type	3/8 inch Pitch
Weight (with bar)	26 lbs / 11.8 kg
Length	35 or 38 inches / 89 or 97 cm
Width	9 inches / 23 cm
Lubrication / Cooling	Internal Water Channels in Bar
Porting	-8 SAE O-Ring
Connection	3/8 inch Flush-Face Quick Disconnect Coupler
Hose Whips	Yes
Sound Power Level (ISO 3744)	108 dBa
Sound Pressure Leves @ Operator 1 meter (ISO 3744)	95 dBa
Vibration Level (ISO 8662-1)	3.7m/sec^2

ACCESSORIES

Chain Repair Spinner	20857
Diamond Chain Repair Breaker	20858
Diamond Chain Repair Kit (inludes p/n 20857 & 20858)	20856
Diamond Chain Service Kit	(sub p/n 20857 or 20858)
Wall Walker (Standard Equipment on Newer Models)	23176
Drive Sprocket	20470
Replacement Nose Sprocket	22800
Carrying Case	28232
Sprocket Wrench	23517
Water Pump Kit (115/230 Volt / 60 Hz)	26020
3/8 inch Flush-Face Coupler Set	03971
1/2 inch Flush-Face Coupler Set	03974
25 feet, 1/2 inch Dual Hose with Flush-Face Couplers	31972
50 feet, 1/2 inch Dual Hose with Flush-Face Couplers	31848
15 inch Bar, Sprocket Nose	30305
18 inch Bar, Sprocket Nose	30306
Diamond Ultra-32, Sealed Chain for 15 inch Bar	56801
Diamond Pinnacle-32, Sealed Chain for 15 inch Bar	56803
Diamond Ultra-37, Sealed Chain for 18 inch Bar	56802
Diamond Pinnacle-32, Sealed Chain for 18 inch Bar	58632
Speed Hook Kit	39496

DS11 PARTS ILLUSTRATION



DS11 PARTS LIST

ITEM	P/N	QTY	DESCRIPTION
	25688	1	Motor Assy - Land Model DS113000
	23756	1	Motor Assy - U/W Model DS115000
1	00208	8	Capscrew, 1/4-20 x 1-3/4
2	06861	1	Rear Gear Housing
3	06316	4	Bushing
4	06838	1	Drive Gear
5	06840	1	Idler Shaft
6	06839	1	Idler Gear
7	00713	2	Dowel Pin
8	00178	1	O-Ring*
9	21417	1	Front Bearing Housing
10	350771	1	O-Ring* (DS113000)
	00171	1	O-Ring* (DS115000)
11	00669	1	Quad Ring*
12	19884	1	Seal Gland
13	00170	1	Retaining Ring
14	03227	1	Needle Roller (DS113000)
	06881	1	Needle Roller (DS115000)
15	20466	1	Motor Shaft (DS113000)
	23752	1	Motor Shaft (DS115000)
16	00148	1	Bearing
17	02905	1	O-Ring*
18	03104	1	Keeper Seal & Bearing
19	03110	1	Teflon Seal*
20	00633	1	Retaining Ring
21	01211	1	O-Ring, 2-016 R16*
22	03280	1	Spacer, Seal Race
23	20472	1	Retaining Ring
24	02004	1	Drive Pin
25	03278	1	Roll Pin
26	22701	1	Torsion Spring
27	31804	1	Roll Pin, 1/4 x 2 Stainless
28	22707	1	Trigger
29	02920	1	On/Off Valve Spacer
30	22704	1	Safety Catch
31	01605	2	O-Ring
32	01219	1	Pipe Plug (Before 2003)
	340045	1	SAE Plug (2003 and Later)
33	00112	1	Quad Ring*
34	02931	1	Valve Cap
35	01604	2	O-Ring, 3-910 R17*
36	02925	1	Valve Spool
37	28552	1	Valve Handle Assy (incl. 32 & 41)
38	20459	1	Hose Clip
39	00787	1	Capscrew, 1/4-20 x 1-1/4 (DS113000)
	35963	1	Capscrew, 1/4-20 x 1-1/4 (DS115000)
40	07226	2	Hose Assy, 18 inch (DS113000)
	06830	2	Hose Assy, 18 inch (DS115000)
41	09437	1	Plug (DS113000)
	03010	1	Plug (DS115000)
42	02916	1	Comp. Coil Spring
43	20497	1	Water Hose Assy (DS113000)
	23755	1	Water Hose Assy (DS15000)
44	00175	8	O-Ring, 2-014 R17*
45	00174	2	Oil Tube
46	20453	1	Extension Housing
47	00961	2	Pipe Plug
48	00018	1	O-Ring, 2-013 R17*
49	22717	3	Pipe Plug, 1/16-27
50	02912	2	Oil Tube

ITEM	P/N	QTY	DESCRIPTION
51	22713	1	Chain Saw Adaptor
52	25260	1	Quad Ring*
53	01211	1	O-Ring, 2-016 R16*
54	20463	1	Water Valve
55	20458	1	Spring
56	350237	1	Hollow Hex Plug
57	22752	1	Hex Nut, 5/16-18 ESNA
58	20470	1	Drive Sprocket
59	20471	1	Trantorque® Adaptor
60	22711	1	Chain Guard
61	02766	2	Plain Washer
62	03276	2	Nut
63	22702	1	Bar Adjustment Nut
64	20465	2	Stud
65	22714	1	Screw, 5/16-18 x 2-3/4
66	02649	3	Handle Bar Retainer
67	02764	3	Screw, 5/16 x 3/4
68	02643	3	Neoprene Washer
69	20461	1	Handle Strut Assy
70	02936	1	Handle Bar (DS113000)
	23754	1	Handle Bar (DS115000)
71	07473	1	Hand Guard
72	03006	4	Capscrew, 5/16-18 x 3/4
73	23176	1	Wall Waker™
74	01758	4	Screw
75	22716	1	Street Elbow
76	21550	1	Gauge (DS113000 Only)
77	12175	2	Washer, 5/16
78	22715	3	Capscrew, 5/16-18 x .625
79	03786	1	GPM Sticker (DS113000)
	03790	1	GPM Sticker (DS115000)
80	-----		Bar (See Accessories)
81	-----		Chain (See Chain Applications)
82	20721	1	Cord Stock
83	03971	1	Coupler Set
84	22945	1	Chain Cover
85	25635	1	Flow Regulator
86	23196	2	Capscrew, 5/16-18 UNC x 3
	23517	1	Sprocket Wrench (Not Shown)
87	12535	1	Circuit “E” Sticker (DS115000 Only)
	11207	1	Circuit “D” Sticker (DS113000 Only)
88	28409	1	Composit Sticker
89	71073	1	CE Tool Plate
90	29530	1	Sound Level Sticker
91	12412	1	Danger Sticker

SEAL KIT PART NUMBER 22798

00178	O-Ring	1
350771	O-Ring	1
00669	Quad Ring	1
02905	O-Ring	1
03110	Teflon Seal	1
01211	O-Ring	2
00112	Quad Ring	2
01604	O-Ring	2
03847	Hose Washer	1
00175	O-Ring	8
00018	O-Ring	1
25260	Quad Ring	1
01605	O-Ring	3

* Part of Seal Kit

DIAMOND CHAIN APPLICATIONS

Model	Bar Length	P/N	Correct Applications
Pinnacle-32 Pinnacle-37	15 inch 18 inch	56803 58632	Very hard aggregate concretes (flint, chert, granite, etc). Heavy steel reinforcing, 5/8 inch/16 mm diameter and larger. Medium/hard aggregate concretes (granite, quartz, river rock, etc). Moderate steel reinforcing (wire mesh 3/8-1/2 inch/10-12 mm diameter). Soft aggregate concrete, concrete block, masonry, “green” concrete, highly abrasive conditions.
Ultra-32 Ultra-37	15 inch 18 inch	56801 56802	Medium/hard aggregate concretes (granite, quartz, river rock, etc). Moderate steel reinforcing (wire mesh 3/8-1/2 inch/10-12 mm diameter). Soft aggregate concrete, concrete block, masonry, “green” concrete, highly abrasive conditions.

WARRANTY

Stanley Hydraulic Tools (hereinafter called "Stanley"), subject to the exceptions contained below, warrants new hydraulic tools for a period of one year from the date of sale to the first retail purchaser, or for a period of 2 years from the shipping date from Stanley, whichever period expires first, to be free of defects in material and/or workmanship at the time of delivery, and will, at its option, repair or replace any tool or part of a tool, or new part, which is found upon examination by a Stanley authorized service outlet or by Stanley's factory in Milwaukie, Oregon to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP.

EXCEPTIONS FROM WARRANTY

FREIGHT COSTS: Freight costs to return parts to Stanley, if requested by Stanley for the purpose of evaluating a warranty claim for warranty credit, are covered under this policy if the claimed part or parts are approved for warranty credit. Freight costs for any part or parts which are not approved for warranty credit will be the responsibility of the individual.

SEALS & DIAPHRAGMS: Seals and diaphragms installed in new tools are warranted to be free of defects in material and/or workmanship for a period of 6 months after the date of first usage, or for a period of 2 years from the shipping date from Stanley, whichever period expires first.

CUTTING ACCESSORIES: Cutting accessories such as breaker tool bits are warranted to be free of defects in material and or workmanship at the time of delivery only.

ITEMS PRODUCED BY OTHER MANUFACTURERS: Components which are not manufactured by Stanley and are warranted by their respective manufacturers.

a. Costs incurred to remove a Stanley manufactured component in order to service an item manufactured by other manufacturers.

ALTERATIONS & MODIFICATIONS: Alterations or modifications to any tool or part. All obligations under this warranty shall be terminated if the new tool or part is altered or modified in any way.

NORMAL WEAR: any failure or performance deficiency attributable to normal wear and tear such as tool bushings, retaining pins, wear plates, bumpers, retaining rings and plugs, rubber bushings, recoil springs, etc.

INCIDENTAL/CONSEQUENTIAL DAMAGES: To the fullest extent permitted by applicable law, in no event will STANLEY be liable for any incidental, consequential or special damages and/or expenses.

FREIGHT DAMAGE: Damage caused by improper storage or freight handling.

LOSS TIME: Loss of operating time to the user while the tool(s) is out of service.

IMPROPER OPERATION: Any failure or performance deficiency attributable to a failure to follow the guidelines and/or procedures as outlined in the tool's operation and maintenance manual.

MAINTENANCE: Any failure or performance deficiency attributable to not maintaining the tool(s) in good operating condition as outlined in the Operation and Maintenance Manual.

HYDRAULIC PRESSURE & FLOW: Any failure or performance deficiency attributable to excess hydraulic pressure, excess hydraulic back-pressure, or excess hydraulic flow.

REPAIRS OR ALTERATIONS: Any failure or performance deficiency attributable to repairs by anyone which in Stanley's sole judgement caused or contributed to the failure or deficiency.

MIS-APPLICATION: Any failure or performance deficiency attributable to mis-application. "Mis-application" is defined as usage of products for which they were not originally intended or usage of products in such a matter which exposes them to abuse or accident, without first obtaining the written consent of Stanley.

WARRANTY REGISTRATION: STANLEY ASSUMES NO LIABILITY FOR WARRANTY CLAIMS SUBMITTED FOR WHICH NO TOOL REGISTRATION IS ON RECORD. In the event a warranty claim is submitted and no tool registration is on record, no warranty credit will be issued without first receiving documentation which proves the sale of the tool or the tools' first date of usage. The term "DOCUMENTATION" as used in this paragraph is defined as a bill of sale, or letter of intent from the first retail customer. A WARRANTY REGISTRATION FORM THAT IS NOT ALSO ON RECORD WITH STANLEY WILL NOT BE ACCEPTED AS "DOCUMENTATION".

NO ADDITIONAL WARRANTIES OR REPRESENTATIONS

This limited warranty and the obligation of Stanley thereunder is in lieu of all other warranties, expressed or implied including merchantability or fitness for a particular purpose except for that provided herein. There is no other warranty. This warranty gives the purchaser specific legal rights and other rights may be available which might vary depending upon applicable law.

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